

OWNER'S MANUAL

Model: PST-200

**100 Amp Digital Battery Load
Tester/Charging System Analyzer
For 12 Volt Batteries**



Send Warranty Product Repairs To:

Customer Returns

P.O. Box 280

1025 E. Thompson Avenue

Hoopeston, IL 60942-0280

**Questions? Call Customer Service
1-800-621-5485**

INSTRUCTIONS FOR USE

WARNING: Handling the cord on this product or cords associated with accessories sold with this product, will expose you to lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. ***Wash hands after handling.***

WARNING - RISK OF EXPLOSIVE GASES

1. Working in the vicinity of a lead acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost importance that each time before using your tester, you read these instructions carefully and follow instructions by battery manufacturer as well.
2. To reduce the risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Observe precautionary markings on these items.

12 Volt BATTERY ANALYSIS - Press “**START TEST**” & wait for 10 seconds. Once automatic test cycle is completed, your test results will be:

1. **GREEN LIGHT = OK**): Battery capacity is good. May or may not be fully charged. Determine state of charge by checking specific gravity (use hydrometer). If gravity is less than full charge, check for possible charging system trouble or electrical drain. Recharge battery to fully charged level.
2. **GREEN + YELLOW LIGHT = OK BUT WEAK**): Review the load test result with the comparison chart on the tester cover to see if this battery is “OK” or not. If it is “OK”, go up to 1ST “OK” state. If it is not, go down to 3rd “WEAK” state.
3. **YELLOW LIGHT = WEAK**): Battery capacity is unsatisfactory. Battery may be either: (1) defective or (2) partially discharged. To determine which, check specific gravity. If gravity is over 1.225, battery is considered defective. If gravity is under 1.225, recharge battery and re-test. If cell-to-cell gravity varies more than 0.025 (25 points), cell trouble may exist. If charging does not bring gravity to fully charged level, the battery is either sulfated or has lost active material.
4. **RED LIGHT = BAD**): Battery may be defective (e.g. a bad cell).

NOTE: If pre-test battery voltage is below 12.3V, tester will not allow and should not perform the load test. Please fully charge battery and retest.

TEMPERATURE COMPENSATION

1 STEP = 50 cranking amps.

BATTERY TEMPERATURE	+20°F	0°F	-20°F
DECREASE BATTERY RATING BY:	1 STEP	2 STEP	3 STEP

If the tester indicates poor battery condition, allow the battery to stabilize for a few minutes and check the open circuit voltage with voltmeter. This is a good measure of the percent charge in the battery. The battery is considered charged if it measures 75% or more. If it failed the load test with 75% charge or above, it should be replaced. If the battery charge measures less than 75%, it should be charged and load tested again. Replace the battery if it fails again. The values in the following chart are for a 12 volt battery:

OPEN CIRCUIT VOLTS*	PERCENT OF CHARGE
11.7 Volts or lower	0
12.0	25
12.2	50
12.4	75
12.6 or higher	100

TESTING THE CHARGING SYSTEM - after battery load test

1. With the tester still connected to the battery, press “START TEST” to toggle the “TEST STATE” lights from “LOAD” to “CHARGING”.
2. Start the engine and allow it to reach normal operating temperature.
3. Run engine at 1200 to 1500rpm. CAUTION: Stay clear of moving engine parts.
4. Read the results. Illumination of the RED-”BAD” light indicates a problem in the charging system that will undercharge a battery (less than 13.6V), or overcharge the battery (over 14.8v)

STARTER MOTOR TEST (12 VOLT VEHICLES ONLY)

This test identifies excessive starter current draw, which makes starting difficult and shortens battery life. Perform battery load test-first to make sure battery is in “GOOD” condition.

ENGINE MUST BE AT NORMAL OPERATING TEMPERATURE

1. Connect negative (black) clamp to the negative (NEG, N, -) battery post. Connect positive (red) clamp to the positive (POS, P, +) battery post. ROCK clamps back and forth to ensure a good electrical connection. **Do not** click “START TEST”.
2. Disable the system ignition so the vehicle engine will not start.
3. Crank the engine and note the voltage reading during engine cranking.
4. A meter reading of 9 volts or less indicates excessive current draw. This may be due to bad connections, a failing starter motor, or the battery is too small for the vehicle’s requirements.

LIMITED WARRANTY

SCHUMACHER ELECTRIC CORPORATION, 801 BUSINESS CENTER DRIVE, MOUNT PROSPECT, ILLINOIS 60056-2179 MAKES THIS LIMITED WARRANTY TO THE ORIGINAL PURCHASER AT RETAIL OF THIS PRODUCT. THIS LIMITED WARRANTY IS NOT TRANSFERABLE.

Schumacher Electric Corporation warrants this battery tester for six months from date of purchase at retail against defective material or workmanship. If such should occur, the unit will be repaired or replaced at the option of the manufacturer. It is the obligation of the purchaser to forward the unit together with the original sales receipt, transportation and/or mailing charges prepaid to the manufacturer or its authorized representative.

This limited warranty is void if the product is misused, subjected to careless handling, or repaired by anyone other than the manufacturer or its authorized representative.

The manufacturer makes no warranty other than this limited warranty and expressly excludes any implied warranty including any warranty for consequential damages.

THIS IS THE ONLY EXPRESS LIMITED WARRANTY AND THE MANUFACTURER NEITHER ASSUMES NOR AUTHORIZES ANYONE TO ASSUME OR MAKE ANY OTHER OBLIGATION TOWARDS THE PRODUCT OTHER THAN THIS EXPRESS LIMITED WARRANTY. THE MANUFACTURER MAKES NO WARRANTY OF MERCHANT ABILITY OR FITNESS FOR PURPOSE OF THIS PRODUCT AND EXPRESSLY EXCLUDES SUCH FROM THIS LIMITED WARRANTY.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LENGTH OF IMPLIED WARRANTY SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.